What Is Claimed Is:

1. A device for an ignition of an air-fuel mixture in an internal combustion engine using a high-frequency electrical energy source, comprising:

a coaxial waveguide structure forming a resonator chamber, into which a high-frequency electrical energy is able to be fed at a predefined coupling-in location at one end of an inner conductor of the waveguide structure,

wherein the waveguide structure extends with the other end of the inner conductor into a respective combustion chamber of a cylinder of the internal combustion engine, a microwave plasma being able to be generated at the other end by a high-voltage potential, and

wherein the coupling-in location is formed in such a way that a feed line is able to be coupled on coaxially, using which a supply of the electrical energy takes place through a coaxial insulation in an outer wall of the waveguide structure into the resonator chamber.

2. The device according to claim 1, wherein the inner conductor is laterally fanned out in a region of the coupling-in location, and, in this context, a predefined length is continued coaxially between the outer wall of the waveguide structure and the feed line and is contacted, ending at the outer wall of the waveguide structure, and wherein the feed line is designed as an axial continuation of the inner conductor.

3. The device according to claim 2, wherein a fanwise opened region of the inner conductor is formed by at least one contact plate connected to the outer wall of the waveguide structure.

4. The device according to claim 3, wherein at least one contact foot and the at least one contact plate are contacted at the inner conductor and at the outer wall by one of welding, shrinking, and soldering.